

CLAIMS

1. A removable gripping device (1) for a container, comprising:

- two members forming a gripper (3, 4) mounted on a gripping body (2), in which one of the members forming a gripper (4) is free to move in translation with respect to the gripping body (2), along a direction approximately parallel to the longitudinal direction of the gripping body (2) between an open position and a closed position in which the members forming a gripper (3, 4) are adapted to grip an edge of the container,

- displacement means (6) adapted to displacing members forming a gripper (3, 4) with respect to each other, comprising a lever (7) free to move in rotation with respect to the gripping body (2) between an extended position and a retracted position in which the mobile member forming a gripper (4) is in the closed position, and a transmission means (9) extending between the lever (7) and the mobile member forming a gripper (4) adapted to displacing the mobile member forming a gripper (4) in translation when the lever (7) is pivoted, said displacement means (6) being adapted to adjusting the distance separating the two members forming a gripper (3, 4) to the thickness of the gripped container, and

- a locking means (26) adapted to prevent separation of the mobile member forming a gripper (4) when the mobile member forming a gripper (4) is in the closed position,

characterised in that the locking means (26) comprises a locking pin (27) installed on the displacement means (6) and designed to penetrate into a housing (29, 30) when the lever (7) is in the retracted position.

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2. Removable gripping device (1) according to claim 1, characterised in that the housing (29, 30) has a through cross-section that depends on the position of the mobile member forming a gripper (4) in the closed position.

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3. Removable gripping device (1) according to claim 2, characterised in that the housing (29, 30) comprises a cavity (29) formed in the gripping body (2), and a slot (30) formed through the mobile member forming a gripper (4).

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4. Removable gripping device (1) according to claim 3, characterised in that the slot (30) is located approximately facing the cavity (29) when the mobile member forming a gripper (4) is in the closed position.

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5. Removable gripping device (1) according to one of claims 2 to 4, characterised in that the through cross-section of the housing (29, 30) becomes larger when the two members forming a gripper (3, 4) become closer to each other when they are in the closed position.

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6. Removable gripping device (1) according to one of claims 1 to 5, characterised in that the locking pin (27) is installed on the lever (7).

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7. Removable gripping device (1) according to claim 6, characterised in that the locking pin (27) is installed free to move in translation with respect to lever (7), and  
5 a locking spring (31) continuously tends to move it towards the direction of the housing (29, 30).

8. Removable gripping device (1) according to claims 3 and 7, characterised in that when the lever (7) is in the  
10 retracted position, the locking pin (27) bears in contact with the wall delimiting the cavity (29) in the direction of the members forming a gripper (3, 4), regardless of the distance separating the two members forming a gripper (3, 4).

15 9. Removable gripping device (1) according to one of claims 1 to 8, characterised in that the locking pin (27) is flared from its head (32) as far as its base (33) through which it is connected to the displacement means (6).

20 10. Removable gripping device (1) according to claim 9, characterised in that the locking pin (27) is flared by a straight wall connecting the head (32) to the base (33).

25 11. Removable gripping device (1) according to claim 9, characterised in that the locking pin (27) is flared by a stepped wall consisting of several steps and connecting the head (32) to the base (33).

12. Removable gripping device (1) according to one of claims 1 to 11, characterised in that the displacement means (6) are shaped such that the lever (7) is in a stable equilibrium position when it is in the extended position and when it is in the retracted position, and it passes through an intermediate unstable equilibrium position when it pivots from one of these two stable equilibrium positions to the other.

13. Removable gripping device (1) according to one of claims 1 to 12, characterised in that a spring (15) is housed in the transmission means (9) and is adapted so that it applies a force to the mobile element (4) so as to adjust the distance separating the two members forming a gripper (3, 4).

14. Removable gripping device (1) according to one of claims 1 to 13, characterised in that the transmission means (9) are formed from a connecting rod (9) free to move in rotation with respect to the lever (7) and to the mobile member forming a gripper (4).

15. Removable gripping device (1) according to claim 14, characterised in that the connecting rod (9) is mounted free to rotate on the lever (7) about a shaft (13) close to the end of the lever (7) opposite the end through which the lever (7) is connected to the gripping body (2).

16. Removable gripping device (1) according to one of claims 1 to 15, characterised in that the length of the

lever (7) corresponds to the width of the three fingers in close contact with each other.

17. Removable gripping device (1) according to one of  
5 claims 1 to 16, characterised in that the lengths of the  
lever (7) and of the gripping body (2) are such that a user  
holding the gripping device (1) in his hand will have his  
index finger and middle finger in contact with the lever  
(7) and his ring finger and little finger in contact with  
10 the gripping body (2).